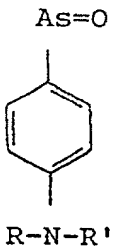
WHAT IS CLAIMED IS:

1. A membrane-impermeable inhibitor of protein disulfide isomerase (PDI).

2. An inhibitor according to Claim I of the formula



wherein at least one of R and R' is a charged ligand containing from 1 to 6 carbon atoms.

3. An inhibitor according to Claim 2, wherein the charged ligand contains at least one sulfonate group.

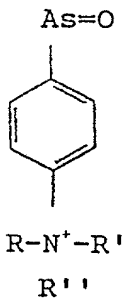
4. An inhibitor according to Claim 2, wherein the ligand is a straight chain or branched alkyl group containing 1, 3, 4, or 6 carbon atoms and at least one sulfonate group.

5. An inhibitor according to Claim 2, wherein the ligand is an aryl group containing at least one sulfonate group.

6. The inhibitor of Claim 5, wherein the sulfonate group is attached to a ring carbon atom.

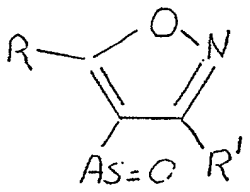
7. The inhibitor of Claim 6, wherein the sulfonate group is attached to the ring carbon atom via a C_1-C_6-alkylene group.

8. An inhibitor according to claim 1 of the formula



wherein R is H or alkyl.

9. An inhibitor according to Claim 1 of the formula



wherein at least one of R and R' is a charged ligand.

10. An inhibitor according to Claim 9, wherein the charged ligand contains at least one sulfonate group.

11. An inhibitor according to Claim 2 or 9, wherein one of R or R' is an uncharged H or C_1-C_6-alkyl ligand.

12. A method for inhibiting PDI by exposing cells expressing PDI to a compound according to any one of Claims 1-8 in an amount sufficient to inhibit PDI activity.

13. The method of Claim 12, wherein PDI activity is measured by assaying L-selectin shedding from leucocytes or lymphocytes.

14. A method for treating a mammal for a viral infection propagated by PDI-mediated virion entry into host cells comprising administering to the mammal phenylarsine oxide (PAO) or a compound according to any one of Claims 1-8 in an amount sufficient to inhibit viral propagation.

15. The method of Claim 14, wherein the viral infection is an HIV infection.

16. A method for measuring the potency of a potential PDI inhibitor comprising assaying cell L-selectin shedding according to the Snezna L-Selectin Assay as a direct measure of inhibition potency.

17. The method of Claim 16, wherein leucocytes or lymphocytes are exposed to a potential PDI inhibitor, tagged with a labeled anti-L-selectin antibody and assayed for released L-selectin.

18. The method of Claim 16, wherein leucocytes or lymphocytes are prelabeled with a detectable anti-L-selectin antibody, contacted with a potential PDI inhibitor, and assayed for released selectin.

19. A method for determining optimum blood concentrations of a PDI inhibitor for treatment of a mammal for a viral infection according to Claim 14 or 15, comprising admixing a blood sample with PDI inhibitor and assaying for leucocyte L-selectin shedding.